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(54) Title: AQUEOUS SUSTAINED-RELEASE DRUG DELIVERY SYSTEM FOR HIGHLY WATER-SOLUBLE ELECTROLYTIC DRUGS

(57) Abstract: The present invention relates to liquid sustained release suspension dosage forms comprising ionized forms of water-soluble drugs. In particular, the invention encompasses a liquid form controlled release drug composition comprising a dispersed phase comprising an ion-exchange matrix drug complex comprising a pharmaceutically acceptable ion-exchange matrix and a water-soluble electrolytic drug associated with the ion-exchange matrix, wherein the surface charge of the ion-exchange matrix is opposite that of the electrolytic drug and a dispersion medium substantially free of diffusible counterions, further comprising a polyelectrolyte having the same charge as the electrolytic drug. The invention also provides methods for preparing such compositions and methods of treatment.



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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/37809

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 9/14

US CL : 424/486

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/486, 493, 78.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,894,239 A (NONOMURA et al) 16 January 1990 (16.01.1990), abstract, columns 1-15 and claims 1-13.	1-22
Y	CUNA et al. Controlled-release liquid suspensions based on ion-exchange particles entrapped within acrylic microcapsules, International Journal of Pharmaceutics, 2000, Vol. 199, pages 151-18, see the entire article.	1-22
Y	JANI et al. Ion exchange resins for ophthalmic delivery. Journal of Ocular Pharmacologicology. Spring 1994, Vol. 10, Issue 1, pages 57-67, see entire document..	1-22

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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